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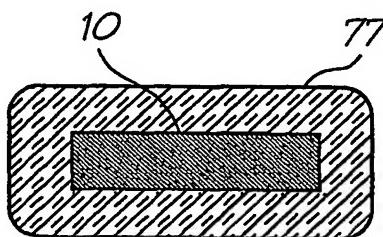
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- (21) International Application Number: PCT/AU2003/001509 (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
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- (71) Applicant (for all designated States except US): SILVERBROOK RESEARCH PTY LTD [AU/AU]; 393 Darling Street, Balmain, New South Wales 2041 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SILVERBROOK, Kla [AU/AU]; Silverbrook Research Pty Ltd, 393 Darling Street, Balmain, New South Wales 2041 (AU). NORTH, Angus, John [AU/AU]; Silverbrook Research Pty Ltd, 393 Darling Street, Balmain, New South Wales 2041 (AU).

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INK JET PRINthead WITH CONFORMALLY COATED HEATER



(57) Abstract: There is disclosed an ink jet printhead which comprises a plurality of nozzles (3) and one or more heater elements (10) corresponding to each nozzle (3). Each heater element is configured to heat a bubble forming liquid in the printhead to a temperature above its boiling point to form a gas bubble (12) therein. The generation of the bubble causes the ejection of a drop of an injectable liquid (such as ink) through the respective corresponding nozzle, to effect printing. Each heater element is substantially covered by a conformal protective coating (77) which has been applied to all sides of the heater element (10) simultaneously so that the coating is seamless.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU03/01509

A. CLASSIFICATION OF SUBJECT MATTER																						
Int. Cl. ⁷ : B41J 2/05																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
B. FIELDS SEARCHED																						
Minimum documentation searched (classification system followed by classification symbols)																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI & IPC : B41J 2/- & keywords inkjet, bubble, heat, vapour, nozzle, coat, layer and similar terms.																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
X	EP 1090758 A2 (CANON KABUSHIKI KAISHA) 11 April 2001 Whole document	1- 59																				
X	Derwent Abstract Accession no. 2001-228728/24, Class E12 G02(G05), JP 2000309101 A (CANON KK) 7 November 2000 Abstract	1- 59																				
X	US 6227640 B1 (MAZE ET AL) 8 May 2001 Whole document	1- 59																				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex																						
<p>* Special categories of cited documents:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">"A"</td> <td>document defining the general state of the art which is not considered to be of particular relevance</td> <td style="width: 20%;">"T"</td> <td>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E"</td> <td>earlier application or patent but published on or after the international filing date</td> <td>"X"</td> <td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L"</td> <td>document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y"</td> <td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O"</td> <td>document referring to an oral disclosure, use, exhibition or other means</td> <td>"&"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"P"</td> <td>document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </table>			"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family	"P"	document published prior to the international filing date but later than the priority date claimed		
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"P"	document published prior to the international filing date but later than the priority date claimed																					
Date of the actual completion of the international search 23 December 2003	Date of mailing of the international search report 7 JAN 2004																					
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer SOOSA GNANASINGHAM Telephone No : (02) 6283 2172																					

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/AU03/01509

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Derwent Abstract Accession no. 2002-570713/61, Class P75;T04, JP 2002192725 A (KYOCERA CORP) 10 July 2002 Abstract	1- 59
X	EP 1177899 A1 (CANON KABUSHIKI KAISHA) 6 February 2002 Whole document	1- 59
X	EP 983854 A2 (CANON KABUSHIKI KAISHA) 8 March 2000 Whole document	1- 59

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/01509

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
EP	1090758	AU	62469/00	CA	2322107	CN	1293112
		JP	2001171126	SG	93271		
JP	2000309101	US	6425659				
US	6227640	JP	7276639	US	6070969	US	2001008411
JP	2002192725						
EP	1177899	CN	1344619	JP	2002113870	US	2002024564
EP	0983854	JP	2000141663	US	2003038852		

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